

COPY FOR IB  
PATENT COOPERATION TREATY

**PCT**

REC'D 12 JUL 2004
WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

09 SEP 2004

Applicant's or agent's file reference U03P2003/PCT	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/KR2003/000472</b>	International filing date (day/month/year) <b>11 MARCH 2003 (11.03.2003)</b>	Priority date (day/month/year) <b>11 MARCH 2002 (11.03.2002)</b>
International Patent Classification (IPC) or national classification and IPC  <b>IPC7 G06F 1/20</b>		
Applicant  <b>KIM, Hwee Chul</b>		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	<p>This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>
3.	<p>This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>

Date of submission of the demand  <b>09 JULY 2003 (09.07.2003)</b>	Date of completion of this report  <b>28 JUNE 2004 (28.06.2004)</b>
<p>Name and mailing address of the IPEA/KR</p> <p> Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea</p> <p>Facsimile No. 82-42-472-7140</p>	<p>Authorized officer</p> <p style="text-align: center;">KIM, Dong Sung</p> <p>Telephone No. 82-42-481-5949</p> <div style="text-align: right;"></div>

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/000472

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheet \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/000472

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-16	YES
	Claims	None	NO
Inventive step (IS)	Claims	4-5	YES
	Claims	1-3, 6-16	NO
Industrial applicability (IA)	Claims	1-16	YES
	Claims	None	NO

**2. Citations and explanations (Rule 70.7)**

Reference is made to the following documents:

D1 : US 5917697(06. 29. 1999)

D2 : US 5559673(09. 24 1996)

**1) NOVELTY (PCT Article 33(2))**

Claims 1-16 of the present invention disclose a cooling system for electric elements in a personal computer PC comprising: an air intake-exhaust unit; an air duct; and connection parts. And more particularly, the present invention relates to a cooling system for cooling a PC electric element by direct intake of external air to a central processor unit and exhausting internal air while also, specifically preventing the re-intake of exhausted air.

No individual citation discloses a cooling system that contains all those elements in this invention.

**2) INVENTIVE STEP (PCT Article 33(3))**

D1 discloses a CPU cooling arrangement including a heat sink, an air pipe, a fan and a hood. The cooling system has a high heat emission efficiency and can reduce energy consumption.

D2 discloses a cooling system which intakes external air into a computer's inner part such as the electrical power supply and central processing apparatus.

Comparing the present invention with D1 and D2, an air duct, connection parts, an inhale-exhale means of the present invention are easily obtained by a person skilled in the art from an air pipe, a hood and a fitting of D1, and from an induction fan and an exhaust fan of D2.

The purposes and effects of the present invention wherein the cooling efficiency of the central processing apparatus is improved, and wherein a PC cooling system of electric elements is provided so that warm air which is exhaled outside of PC through an exhaust fan does not flow back into the PC through the air intake means are expected by a person skilled in the art from the components described in D1 and D2.

Therefore, Claims 1-3 and 6-16 of the present invention are easily invented by a person skilled in the art from the combinations of D1 and D2. Accordingly, the present invention is not considered to involve an inventive step.

**3) INDUSTRIAL APPLICABILITY (PCT Article 33(4))**

The present invention is considered to be industrially applicable.